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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,560	06/30/2003	Hong Wang	3691-570	7266

23117 7590 02/09/2005  
NIXON & VANDERHYE, PC  
1100 N GLEBE ROAD  
8TH FLOOR  
ARLINGTON, VA 22201-4714

EXAMINER

STEIN, STEPHEN J

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/608,560

Applicant(s)

WANG ET AL.

Examiner

Stephen J Stein

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-20, 24 and 26-33 is/are rejected.
- 7) ☒ Claim(s) 8-10, 21-23, 25 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/30/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 recites the limitation "contacting the IR reflecting layer and the underlayer comprising chromium oxide". The claim lacks antecedent basis for this limitation.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 26-29, 31 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,492,619 (Sol).

Sol discloses a multilayer coating on a glass substrate comprising a silver (Ag) IR reflecting layer and an overcoat comprising NiCrO<sub>x</sub> (under layer) and a silicon nitride (outer layer) over the nickel chromium oxide layer (See Figure 4). In table 1, it is disclosed that the thickness of the NiCrO<sub>x</sub> layer (underlayer) can be 5-100 angstroms in thickness and the outer

Art Unit: 1775

silicon nitride layer can be 0-400 angstroms (3 times thicker). With regard to the process limitations recited in claim 27, process limitations in product claims are generally not dispositive on patentability unless it is shown that the process limitations produce a materially different product. MPEP §2113.

5. Claims 1-7, 11 and 26-33 rejected under 35 U.S.C. 102(e) as being anticipated by US 6627317 B2 (Wang).

Wang discloses a heat treated coated article comprising a glass substrate (11), a NiCr IR reflecting layer (15) (solar control layer) over the substrate, and an overcoat layer comprising a layer of  $\text{Cr}_2\text{O}_3$  and an outer layer of silicon nitride (See Figures 4 and 5 and col. 8). Wang further teaches that the silicon nitride outer layer is at least 3 times thicker than the chromium oxide underlayer (See Figure 5). The Wang reference still further teaches that the outer silicon nitride layer is sputtered from a silicon target containing aluminum (i.e. the silicon nitride outer layer further contains aluminum)(col. 2).

6. Claims 12-20, 23 and 26-33 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,830,817 (Stochowiak).

Stochowiak teaches a coated article comprising a glass substrate, an IR reflecting layer comprising silver over the glass substrate and an overcoat layer comprising an under layer of niobium oxide and an outer layer of silicon nitride (See Figure 9). The reference further teaches that the coated article has a layer of  $\text{NiCrO}_x$  between the IR reflecting layer and the underlayer of the overcoat layer (Figure 9) Stochowiak still further teaches that that there are two Ag IR reflecting layers below the overcoat layer (See Figure 9). The reference still further teaches that the silicon nitride layer may be formed from a sputtering technique disclosed in SN 09/794,224

Art Unit: 1775

(US 6,576,349) which discloses that the outer silicon nitride layer is sputtered from a silicon target containing aluminum (i.e. the silicon nitride outer layer further contains aluminum). The reference finally teaches that the silicon nitride outer layer may be 3 times thicker than the silicon nitride underlayer (See col. 29 and 30 and table).

***Allowable Subject Matter***

7. Claims 8-10, 21-23, 25 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or suggest the combinations recited in dependent claims 8-10, 21-23, 25 and 34.

***Conclusion***


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Stein whose telephone number is 572-272-1544. The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 5:00 p.m. If the attempts to reach the examiner are unsuccessful, the examiner's supervisor, Deborah Jones can be reached by dialing 571-272-1535. The official fax number is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 1775

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 7, 2005

  
Stephen J. Stein  
Primary Examiner  
Art Unit 1775